

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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November 6, 2012

TO: Internal File

THRU: Steve Christensen, Team Lead *SKC*

FROM: Amanda Daniels, Hydrologist *AD*

RE: East Mountain Emergency Drill Holes – Phase I Bond Release, Genwal Resources, Inc., Crandall Canyon Mine, C/015/0032, Task ID #4193

### SUMMARY:

On September 14, 2012, the Utah Division of Oil Gas & Mining received an application for an amendment to the Mining & Reclamation Plan (MRP) of the Crandall Canyon Mine. The application seeks approval for Phase I Bond Release of areas on East Mountain. The area has been reclaimed pursuant to R645-301-880.310 and is located in Emery County, Utah. Phase I reclamation began in the fall of 2007. The reclamation included backfilling and grading to AOC, as well as drainage control, and was completed in September of 2011. The area of Phase I bond release contains approximately 9.5 acres.

In August of 2007 seven emergency boreholes were drilled from the surface to the underground mine workings after miners were trapped underground. The drill sites and access roads were within the DOGM permit area and involved constructing roads on Forest Service and SITLA land.

A Phase I bond release inspection was conducted on October 10, 2012. It was observed that the reclaimed roads and drill pads had been properly graded and seeded to prevent any excessive erosion. In 2011 a slope failure occurred along one of the access roads, since then the area has been monitored for stability, excelsior logs were installed perpendicular to the slope, and the site has been vegetated. The slope appears to be stable and the excelsior logs appear to be effectively preventing additional erosion.

This memo addresses the application's compliance with the hydrology (R645-301-700) sections of the Utah Coal Mining Rules. No deficiencies were identified.

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**TECHNICAL ANALYSIS:**

**RECLAMATION PLAN**

**HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

**Analysis:**

According to the bond release application, reclamation work on the access roads and drill pads included re-grading disturbed areas to original contours, pocking and gouging, re-seeding, and installing water bars and staked excelsior logs as necessary.

During reclamation, along the road that continues past pad #4 to the ledge above, a small seep was found. The seep was contained by laying drainage rock and a perforated drain pipe from the seep, across the road, day-lighting onto native land on the downhill side of the road. The drainage rock was covered with geo-textile. The road was then reclaimed and re-seeded.

At the slide area just below pad #6 the applicant has attempted to stabilize the site by installing a total of 29 ten foot excelsior logs in 9 rows, approximately 15 feet apart. Small pine trees were transplanted at the top of the slide and the area was re-seeded. The slide has not appeared to move since the original 2011 slide. The excelsior logs appear to be effectively controlling drainage along the slide.

During the October 10<sup>th</sup> bond release inspection, all reclaimed areas appeared stable with no excessive erosion.

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

**RECOMMENDATIONS:**

Approval is recommended at this time.